

**COLORADO RIVER RECOVERY PROGRAM  
FY-2001 SCOPE OF WORK**

Project No.: 22-A-2

Lead Agency: Fish and Wildlife Service  
Colorado River Fishery Project

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Date: April 7, 2000

Category:

☒ Ongoing

☐ Ongoing-revised project

☐ Requested new project

☐ Unsolicited proposal

Expected Funding Source:

☒ Annual funds

☐ Capital funds

☐ Other (explain)

I. Title of Proposal: Monitoring the Colorado pikeminnow population in the mainstem Colorado River via periodic population estimates.

II. Relationship to RIPRAP:

Colorado River Action Plan: Colorado River Mainstem,

V. Monitor populations and habitat and conduct research to support recovery actions.

V.A. Conduct research to acquire life history information and enhance scientific techniques required to complete recovery actions.

III. Study Background/Rationale and Hypotheses:

The best method for monitoring populations of the endangered fishes is to periodically develop population estimates. Such estimates over time can provide a much more accurate means of assessing population trends than standard catch per effort statistics. The first such estimate for the Colorado River population of Colorado pikeminnow was provided by Osmundson and Burnham (1996) for the 1991-1994 period. The next such estimate will cover the 1998-2000 period. Mid-points for these estimates will be about 6 years apart.

#### IV. Study Goals, Objectives, End Product:

##### Goal

Our goal is to provide a whole-river estimate for the adult Colorado pikeminnow population in the Colorado River mainstem for comparison with past estimates.

##### Objectives

1. Capture and mark subadult and adult Colorado pikeminnow from throughout the river for a three-year period making three complete passes through the upper reach (upstream of Westwater Canyon) and two through the lower reach (downstream of Westwater Canyon) each year.
2. Develop a population estimate from mark-recapture data.
3. Assess recruitment trends by analyzing length frequency histograms.

##### End Product

Provide final report on study findings

#### V. Study Area:

Sample Colorado River from Price Stub dam downstream to the confluence with the Green River, excluding Westwater Canyon.

#### VI. Study Methods/Approach:

Capture sub-adult and adult Colorado pikeminnow riverwide with extensive netting effort in flooded backwaters during the period of spring. Electrofishing will be used to capture pikeminnow in reaches where backwaters are few. Fish will be measured, weighed, checked for the presence of a coded-wire microtag (indicating hatchery origin), and PIT-tagged if not already so marked.

Size structure of the population will be analyzed and compared against earlier data (1991-1995) to determine recent trends in recruitment frequency, identification of strong year-classes, and differences in upper and lower reach demographics.

Develop mark-recapture estimate of population size using three years of capture records.

## VII. Task Description and Schedule

### Description

Task 1. Capture and PIT tag Colorado pikeminnow (mid April-mid June)

Task 2. Analyze data

Task 3. Write draft and final reports

### Schedule

Task 1: 1998

Task 1: 1999

Task 1 and 2: 2000

Task 2 and 3: 2001

## VIII. FY-2001 Work (fourth year of multi-year study)

Deliverables/Due Dates: Final Report due 3/2001

### Budget

1. Labor (salary and benefits)	30,000
2. Travel	0
3. Equipment	0
4. Other (printing, etc)	<u>1,000</u>
	\$ 31,000